AMENDMENTS TO THE CLAIMS

Please amend Claim 38 as follows.

1-3. (CANCELLED)

4. (PREVIOUSLY PRESENTED) A method for providing a foil, comprising:

(a) providing a foil having an inward portion, a tip portion, a lower surface, an upper surface, a leading edge and a trailing edge, said foil having relative movement to a fluid medium in a manner capable of creating an upward lifting force on said foil relative to the plane of said relative movement, said upward lifting force is substantially directed from said lower surface toward said upper surface;

(b) providing said foil with a vortex generator connected to said foil near said tip portion, said vortex generator having a substantially streamwise alignment relative to said foil between a vortex generator leading edge and a vortex generator trailing edge that is oriented at a predetermined angle of attack relative to said relative movement, said vortex generator extending below said lower surface of said foil and terminating at a lower end of said vortex generator, said vortex generator having an outward surface and an inward surface, said inward surface being arranged to form a region of relatively lower pressure along said inward surface relative to said outward surface so as to create an inward directed lifting force on said vortex generator that is substantially directed from said outward surface toward said inward surface, said inward directed lifting force being sufficient to create an inward directed cross flow condition in the wake behind said lower end of said vortex generator that is substantially directed from said tip portion of said foil toward said inward portion of said foil relative to said lower surface of said foil; and

(c) arranging the direction of said inward lifting force created by said vortex generator to be oriented sufficiently perpendicular to said upward lifting force created by said foil to substantially prevent a significantly strong downward directed vector component of said inward lifting force from forming on said vortex generator which could significantly oppose said upward lifting force generated by said foil, wherein said inward lifting force on said vortex generator is able to create said inward directed cross

flow without simultaneously creating a significant reduction in said upward lifting force on said foil.

5. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said inward surface has a predetermined contour capable of forming a forward directed vector component of said inward lifting force along said inward surface.

6. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said inward surface has a predetermined contour capable of tilting said inward lifting force toward the direction of relative movement of said foil.

7. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said vortex generator has a predetermined chord line between said vortex generator leading edge and said vortex generator trailing edge, said vortex generator having a predetermined asymmetrical foil shape along said predetermined chord line.

8. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said outward surface has less camber than said inward surface.

9. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said inward surface has a predetermined convex cambered contour capable of forming a forward directed vector component of said inward lifting force along said inward surface.

10. (PREVIOUSLY PRESENTED) The method of Claim 9 wherein said outward surface has a different shape than said inward surface so as to permit said vortex generator to have an asymmetrical foil shape.

11. (PREVIOUSLY PRESENTED) The method of Claim 10 wherein said asymmetrical foil shape is sufficient to permit said inward directed cross flow condition to form with a reduction in said predetermined angle of attack of said vortex generator.

12. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said vortex generator has an inward directed asymmetrical camber between said outward surface and said

inward surface sufficient to permit said inward directed cross flow condition to form while said predetermined angle of attack of said vortex generator is reduced in an amount effective to create a net decrease in the drag created by said vortex generator on said foil.

13. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said foil has a tendency to create an outward directed cross flow condition relative to said lower surface near said tip portion and said inward directed cross flow condition created by said vortex generator is sufficient to create a reduction in said outward cross flow condition.

14. (PREVIOUSLY PRESENTED) The method of Claim 13 wherein said outward directed cross flow condition has a tendency to create an induced drag vortex in said wake behind said tip portion and said inward directed cross flow condition is sufficient to move said induced drag tip vortex to a position within said wake that is inward of said vortex generator.

15. (PREVIOUSLY PRESENTED) The method of Claim 13 wherein said outward directed cross flow condition has a tendency to create an induced drag vortex in said wake behind said tip portion and said inward directed cross flow condition created by said vortex generator is sufficient to create a reduction in the strength of said induced drag tip vortex.

16. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said tip portion of said foil has a tendency to create an induced drag vortex in said wake behind said tip portion and said inward directed cross flow condition is arranged to create a counter vortex in said wake behind said vortex generator that has a direction of spin that is opposite to said induced drag vortex.

17. (PREVIOUSLY PRESENTED) The method of Claim 16 wherein said counter vortex is arranged to merge with said induced drag vortex in said wake behind said foil in an amount sufficient to create a reduction in the strength of said induced drag vortex.

18. (PREVIOUSLY PRESENTED) The method of Claim 16 wherein said induced drag vortex and said counter vortex are arranged to form a converging upwash field in said wake behind said foil at a position that is inward of said tip portion.

19. (PREVIOUSLY PRESENTED) The method of Claim 16 wherein said induced drag vortex creates a downwash field in said wake behind said foil and said counter vortex is arranged to create an upwash field in said wake behind said vortex generator, said upwash field being sufficient to create a reduction in the strength of said downwash field.

20. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said inward lifting force is substantially parallel to said lower surface of said foil and substantially directed from said tip portion of said foil toward said inward portion of said foil adjacent said lower surface.

21. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein said predetermined angle of attack is arranged to be adjustable.

22. (PREVIOUSLY PRESENTED) A foil tip comprising a tip droop extending below a high pressure surface of a foil and terminating at a lower end of said tip droop, said tip droop having a droop leading edge, a droop trailing edge, an inward droop surface and an outward droop surface, said tip droop having a predetermined chord line between said droop leading edge and said droop trailing edge, said tip droop having a predetermined asymmetrical foil shape along said predetermined chord line that is arranged to create a region of reduced pressure along said inward droop surface of said tip droop.

23. (PREVIOUSLY PRESENTED) The method of Claim 22 wherein said region of reduced pressure along said inward droop surface forms an inward lifting force along said inward surface, said inward droop surface having a predetermined contour capable of creating a forward directed vector component of said inward lifting force.

24. (PREVIOUSLY PRESENTED) The method of Claim 22 wherein said foil has relative movement to a fluid medium, said region of reduced pressure along said inward droop surface forms an inward lifting force along said inward surface, said inward droop surface having a predetermined contour capable of tilting said inward lifting force toward said direction of relative movement of said foil.

25. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said region of reduced pressure along said inward droop surface is arranged to create an inward directed lifting force that is substantially parallel to said high pressure surface of said foil.

26. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said foil is arranged to create an upward lifting force and said region of reduced pressure along said inward droop surface is arranged to create an inward directed lifting force, and said inward directed lifting force is arranged to be sufficiently perpendicular to said upward lifting force to substantially reduce the formation of a significantly strong downward directed vector component of said inward directed lifting force so as to not create a significant reduction in said upward lifting force created by said foil.

27. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said region of reduced pressure along said inward droop surface is arranged to create an inward directed cross flow condition in the wake behind said foil that is substantially directed from said tip droop toward said high pressure surface of said foil.

28. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said tip droop is arranged to create an increase in the efficiency of said foil.

29. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said tip droop is arranged to create an increase in the performance of said foil.

30. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said tip droop is arranged to create a substantially inward directed spanwise cross flow condition in the wake behind said lower end of said tip droop.

31. (PREVIOUSLY PRESENTED) The foil tip of Claim 30 wherein said foil has a tendency to produce an outward directed spanwise flow condition along said high pressure surface near said tip portion of said foil and said inward spanwise flow condition created by said tip droop is sufficient to reduce said outward directed spanwise flow conditions along said high pressure surface near said tip portion of said foil.

32. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said foil has a tendency to produce an outward directed spanwise flow condition along said high pressure surface near said tip portion of said foil and said tip droop is arranged to create a reduction in said outward directed spanwise flow condition.

33. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein at least one portion of said tip droop is arranged to be able to pivot around a substantially vertical axis relative to said foil.

34. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said asymmetrical foil shape is arranged to create an inward spanwise flow condition adjacent to said lower end of said tip droop.

35. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said asymmetrical foil shape is oriented at a negative angle of attack.

36. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said inward droop surface is oriented at a predetermined angle of attack that is divergent relative to said tip portion of said foil.

37. (PREVIOUSLY PRESENTED) The foil tip of Claim 22 wherein said inward droop surface is more cambered than said outward droop surface.

38. (CURRENTLY AMENDED) A method for providing a vortex generator comprising:

(a) providing a substantially streamwise foil extending from a predetermined surface of a predetermined body, said predetermined surface having relative movement to a fluid medium capable of forming a predetermined boundary layer having a predetermined boundary layer thickness within said fluid medium along said predetermined surface, said streamwise foil having a substantially streamwise alignment with a predetermined chord length existing between a vortex generator leading edge and a vortex generator trailing edge, said substantially streamwise foil having a lower pressure surface, a higher pressure surface, a root portion adjacent said surface and an outer end

portion spaced from said predetermined surface and said root portion wherein said outer end portion extends a predetermined height away from said predetermined surface of said predetermined body;

(b) providing said streamwise foil with a significantly low aspect ratio wherein said predetermined height of said streamwise foil is significantly smaller than said predetermined chord length of said streamwise foil~~, said predetermined height being selected from the group consisting of heights that are less than said predetermined boundary layer thickness and heights that extend a significantly small distance into the free stream existing above said predetermined boundary layer thickness~~; and

(c) providing said lower pressure surface with a predetermined lift inducing camber arranged to create a lifting force that is substantially transverse to said substantially streamwise alignment, said predetermined lift inducing camber being sufficient to create a substantially transverse flow condition relative to said outer end portion of said vortex generator, said substantially transverse flow condition occurring substantially in a direction from said higher pressure surface toward said lower pressure surface, said transverse flow condition being sufficient to permit said streamwise foil to form a substantially streamwise vortex in the wake behind said vortex generator and said predetermined height of said vortex generator being sufficiently low enough to permit at least one portion of said substantially streamwise vortex to exist within said predetermined boundary layer along said predetermined surface, whereby said substantially streamwise vortex is capable of adding energy into said predetermined boundary layer.

39. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said lower pressure surface is arranged to have a predetermined contour capable of forming a forward directed vector component of said lifting force that is substantially directed in the direction of said relative movement.

40. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said lower pressure surface is arranged to have a predetermined contour capable of tilting said lifting force toward the direction of said relative movement.

41. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said streamwise vortex created by said vortex generator is arranged to create a reduction in said predetermined boundary layer thickness along said predetermined surface of said predetermined body.

42. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said streamwise foil has a predetermined chord line between said vortex generator leading edge and said vortex generator trailing edge, said stream wise foil is arranged to have an asymmetrical foil shape along said predetermined chord line.

43. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said predetermined body is a foil.

44. (PREVIOUSLY PRESENTED) The method of Claim 43 wherein said foil has a tip portion and said vortex generator is located near said tip portion.

45. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said vortex generator is arranged to be pivotally adjustable relative to said predetermined surface.

46. (PREVIOUSLY PRESENTED) The method of Claim 45 wherein said vortex generator is arranged to about a predetermined axis that is substantially perpendicular to said predetermined surface.

47. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein said streamwise foil has an asymmetrical foil shape.

48. (PREVIOUSLY PRESENTED) The method of Claim 38 wherein higher pressure surface of said streamwise foil is less cambered than said lower pressure surface of said streamwise foil.